## INDEX TO THE TRANSACTIONS OF THE INSTITUTION OF CHEMICAL ENGINEERS

**VOLUME 58 1980** 

THE INSTITUTION OF CHEMICAL ENGINEERS
George E. Davis Building
165–171 Railway Terrace Rugby CV21 3HQ

## **AUTHOR INDEX**

	Page		Page
Allen, M. L., The effect of particle proximity on the drag force generated at high Reynolds numbers	187	Heywood, N. I., Richardson, J. F., and Farooqi, S. I., Drag reduction by air injection for suspension flow in a horizontal pipeline	16
Bansal, L. S., Bond, R. S., Vazakas, V., and Heggs, P. J., Thermal		Howley, P., Wall, T. F., Nguyen, H., Subramanian, V., and Mai-	10
regenerator design charts including intraconduction effects. Bejerano, T., Germain, S., and Goodridge, F., The electrochemical	265	Viet, T., Direct measurements of the entrainment by single and double concentric jets in the regions of transition and flow	227
production of propylene oxide in a small pilot plant Bettelheim, J., Foster, P. M., and Kyte, W. S., The effect of	28	establishment.  Hungerbuehler, K., and Bourne, J. R., An experimental study of the	237
condensation upon transfer rates with application to flue-gas washing plants	3	scale-up of a well-stirred crystalliser	51
Bjerle, I., and Karlsson, H. T., On the enhancement factor for		Jeffreys, G. V., Sarkar, S., Phillips, C. R., and Mumford, C. J.,	
instantaneous irreversible gas/liquid reactions.  Bond, R. S., Vazakas, V., Heggs, P. J., and Bansal, L. S., Thermal	138	Mechanisms of phase inversion in rotary agitated columns Joshi, J. B., Axial mixing in multiphase contactors—a unified correlation	43 155
regenerator design charts including intraconduction effects Booth, A. D., Karmarkar, M., Knight, K., and Potter, R. C. L.,	265	Jung, K., and Stanmore, B., The burn-out rates of brown coal char	155
Design of emergency venting system for phenolic resin reactors.  Parts 1 and 2	75	particles in a fluidised combustor	66
Bourne, J. R., and Hungerbuehler, K., An experimental study of the	£1	Karlsson, H. T., and Bjerle, I., On the enhancement factor for	120
scale-up of a well-stirred crystalliser  Branch, S. J., Thambynayagam, R. K. M., and Winter, P., Film	51	instantaneous irreversible gas/liquid reactions	138
penetration model for mass and heat transfer with high fluxes	277	Design of emergency venting system for phenolic resin reactors. Part 1 and 2	75
Brea, F. M., and Kitic, D., Influence of moisture on fluidising velocities in batch fluid bed drying	208	Kitic, D., and Brea, F. M., Influence of moisture on fluidising velocities in batch fluid bed drying	
Chen, J. M., and Yang, R. T., Modelling and kinetic studies of a		Knight, K., Potter, R. C. L., Booth, A. D., and Karmarkar, M.,	
rotary kiln reactor	98	Design of emergency venting system for phenolic resin reactors.	
Cornelissen, A. E., Simulation of absorption of H <sub>2</sub> S and CO <sub>2</sub> into		Part 1 and Part 2.  Knight, M. J., Rowe, P. N., MacGillivray, H. J., and Cheesman,	75
aqueous alkanolamines in tray and packed columns Couderc, J. P., Sandoval-Robles, J. G., and Riba, J. P., Mass	242	D. J., On measuring the density of finely divided but porous	
transfer around a sphere	132	particles such as fluid bed cracking catalyst	203
Creasy, D. E., De Silva, R. L., and Falangas, E., Crystal growth rate		Kyte, W. S., Bettelheim, J., and Foster, P. M., The effect of condensation upon transfer rates with application to flue-gas	
determination from desupersaturation measurements	135	washing plants	3
Davidson, J. F., and Field, R. W., Axial dispersion in bubble		Laverack, S. D., The effect of particle concentration on the	3 - 0
columns	228	boundary flow in a hydrocyclone	. 33
De Silva, R. L., Falangas, E., and Creasy, D. E., Crystal growth rate determination from desupersaturation measurements.  Dedd. P. Moot representation of figures and temperature of figures.	135	Lockett, M. J., and Uddin, H. D., Liquid-phase controlled mass transfer froths on sieve trays	166
Dodd, R., Mean temperature difference and temperature efficiency for shell and tube heat exchangers connected in series with two		MacGillivray, H. J., Cheesman, D. J., Knight, M. J., and Rowe,	
tube passes per shell pass	.9	P. N., On measuring the density of finely divided but porous particles such as fluid bed cracking catalyst	203
Edwards, M. F., and Smith, R., The integration of the energy		McKay, G., and McLain, H., The fluidisation of cuboid particles McKay, G., and McLain, H. D., The transportation of cuboid	107
equation for fully developed pipe-flow	260	particles in horizontal pipelines	. 175
Fakhimi, S., and Harrison, D., The voidage fraction near a horizontal tube immersed in a fluidised bed	125	McLain, H., and McKay, G., The fluidisation of cuboid particles McLain, H. D., and McKay, G., The transportation of cuboid	
Farrell, P. C., and Skalsky, M., Uptake characteristics of selected		particles in horizontal pipelines	. 175
biochemicals on coated and uncoated activated charcoal	91	Mai-Viet, T., Howley, P., Wall, T. F., Nguyen, H., and	1
Falangas, E., Creasy, D. E., and De Silva, R. L., Crystal growth rate determination from desupersaturation measurements.	135	Subramanian, V., Direct measurement of the entrainment by single and double concentric jets in the regions of transition and	1
Farooqi, S. I., Heywood, N. I., and Richardson, J. F., Drag		flow establishment	. 237
reduction by air injection for suspension flow in a horizontal	16	Markatos, N. C. G., Turbulent air flow over water waves McManamey, W. J., A circulation model for batch mixing in	. 251
Farooqi, S. I., and Richardson, J. F., Rheological behaviour of	ſ	agitated, baffled vessels	. 271
kaolin suspensions in water and water-glycerol mixtures Field, R. W., and Davidson, J. F., Axial dispersion in bubble	116	Mumford, C. J., Jeffreys, G. V., Sarkar, S., and Phillips, C. R. Mechanisms of phase inversion in rotary agitated columns.	. 43
columns	. 228	vicenanisms of phase inversion in rotary agreated columns .	. 43
Foster, P. M., Kyte, W. S., and Bettelheim, J., The effect of	ſ	Naimer, N. S., and Nienow, A. W., Continuous mixing of two	
condensation upon transfer rates with application to flue-gas washing plants	. 3	particulate species of different density in a gas fluidised bed. Nettleton, M. A., Comments on "Concentration limits to th initiation of unconfined detonation in fuel/air mixtures" by Bul	
Germain, S., Goodridge, F., and Bejerano, T., The electrochemica	1	Nguyen, H., Subramanian, V., Mai-Viet, T., Howley, P., and Wall	
production of propylene oxide in a small pilot plant	. 28	T. F., Direct measurement of the entrainment by single and	d
Goodridge, F., Bejerano, T., and Germain, S., The electrochemica production of propylene oxide in a small pilot plant	. 28	double concentric jets in the regions of transition and flow establishment.	. 237
Grosjean, P. R. L., and Sawistowski, H., Liquid/liquid mass	S	Nienow, A. W., and Naimer, N. S., Continuous mixing of two	0
transfer accompanied by instantaneous chemical reaction	. 59	particulate species of different density in a gas fluidised bed.	. 181
Harrison, D., and Fakhimi, S., The voidage fraction near a horizontal tube immersed in a fluidised bed	. 125	Phillips, C. R., Mumford, C. J., Jeffreys, G. V., and Sarkar, S	S.,
Heggs, P. J., Bansal, L. S., Bond, R. S., and Vazakas, V., Therma	1	Mechanisms of phase inversion in rotary agitated columns .	. 43
regenerator design charts including intraconduction effects.  Heggs, P. J., and Stones, P. R., Improved design methods for finner	. 265	Potter, R. C. L., Booth, A. D., Karmarkar, M., and Knight, K Design of emergency venting system for phenolic resin reactor	k.,
tube heat exchangers	. 147	Part 1 and Part 2	. 75

100 7710	Page		Page
Riba, J. P., Couderc, J. P., and Sandoval-Robles, J. G., Mass transfer around a sphere	132	Stubington, J. F., Heat transfer between a freely-rising slug and a fluidised bed .  Subramanian, V., Mai-Viet, T., Howley, P., Wall, T. F., and Nguyen, H., Direct measurement of the entrainment by single	195
Richardson, J. F., Farooqi, S. I., and Heywood, N. I., Drag reduction by air injection for suspension flow in a horizontal		and double concentric jets in the regions of transition and flow establishment.	
Robinson, K. S., and Thomas, W. J., The adsorption of meth- ane/ethane mixtures on a molecular sieve	1-10		219
Roscoe, J. C., Witkowski, A. R., and Harrison, D., The temperature of coke particles in a fluidised combustor	69	Thambynayagam, R. K. M., Winter, P., and Branch, S. J., Film penetration model for mass and heat transfer with high fluxes	
Rowe, P. N., MacGillivray, H. J., Cheesman, D. J., and Knight, M. J., On measuring the density of finely divided but porous particles such as fluid bed cracking catalyst	203	Uddin, H. D., and Lockett, M. J., Liquid-phase controlled mass transfer froths on sieve trays	166
Sandoval-Robles, J. G., Riba, J. P., and Couderc, J. P., Mass transfer around a sphere	132	Vazakas, V., Heggs, P. J., Bansal, L. S., and Bond, R. S., Thermal regenerator design charts including intraconduction effects.	
Mechanisms of phase inversion in rotary agitated columns Sawistowski, H., and Grosjean, P. R. L., Liquid/liquid mass transfer accompanied by instantaneous chemical reaction.	59	Wall, T. F., Nguyen, H., Subramanian, V., Mai-Viet, T., and Howley, P., Direct measurements of the entrainment by single and double concentric jets in the regions of transition and flow	e v
Skalsky, M., and Farrell, P. C., Uptake characteristics of selected biochemicals on coated and uncoated activated charcoal	91	establishment. Winter, P., Branch, S. J., and Thambynayagam, R. K. M., Film	. 237
Smith, R., and Edwards, M. F., The integration of the energy	W 805	penetration model for mass and heat transfer with high fluxes	s 277
equation for fully developed pipe-flow	260	Witkowski, A. R., Harrison, D., and Roscoe, J. C., The temperature of coke particles in a fluidised combustor	
particles in a fluidised combustor .  Stones, P. R., and Heggs, P. J., Improved design methods for finned tube heat exchangers		Yang, R. T., and Chen, J. M., Modelling and kinetic studies of a rotary kiln reactor.	a . 98

## TITLE INDEX

	Page	arms with all I demonstrate the second	Page
Adsorption of methane/ethane mixtures on a molecular sieve by K. S. Robinson and W. J. Thomas	219	Heat transfer between a freely-rising slug and a fluidised bed by J. F. Stubington.	195
Davidson	228	Improved design methods for finned tube heat exchangers by P. J.	
Axial mixing in multiphase contactors; a unified correlation by J. B. Joshi	155	Heggs and P. R. Stones	147
		drying by D. Kitic and F. M. Brea	208
Burn-out rates of brown coal char particles in a fluidised combus- tor by B. Stanmore and K. Jung.	66	M. F. Edwards and R. Smith	260
Circulation model for batch mixing in agitated baffled vessels by		Liquid/liquid mass transfer accompanied by instantaneous chemi-	59
W. J. McManamey	271	cal reaction by P. R. L. Grosjean and H. Sawistowski Liquid-phase controlled mass transfer froths on sieve trays by M. J.	39
Concentration limits to the initiation of unconfined detonation in fuel/air mixtures by David Bull. Comment by M. A. Nettleton		Lockett and M. S. Uddin	166
Continuous mixing of two particulate species of different density in		Mass transfer around a sphere by J. G. Sandoval-Robles, J. P. Riba	
a gas fluidised bed by A. W. Nienow and N. S. Naimer  Crystal growth rate determination from desupersaturation	181	and J. P. Couderc	132
measurements by R. L. De Silva, E. Falangas and D. E. Creasy	135	Mean temperature difference and temperature efficiency for shell and tube heat exchangers connected in series with two tube passes per shell pass by R. Dodd	9
Design of emergency venting system for phenolic resin reactors Part 1 and Part 2 by A. D. Booth, M. Karmarkar, K. Knight and		Measuring the density of finely divided but porous particles such as fluid bed cracking catalyst by M. J. Knight, P. N. Rowe, H. J. MacGillivray and D. J. Cheeseman	202
R. C. Potter	. 75	Mechanisms of phase inversion in rotary agitated columns by S.	203
concentric jets in the regions of transition and flow establish-		Sarkar, C. R. Phillips, C. J. Mumford and G. V. Jeffreys	43
ment by T. F. Wall, H. Nguyen, V. Subramani, T. Mai-Viet and	. 237	Modelling and kinetic studies of a rotary kiln reactor by J. M. Chen and R. T. Yang	98
P. Howley	1		
pipeline by S. I. Farooqi, N. I. Heywood and J. F. Richardson	16	Rheological behaviour of kaolin suspensions in water and water-glycerol mixtures by S. I. Farooqi and J. F. Richardson	116
Effect of condensation upon transfer rates with application to flue gas washing plants by J. Bettelheim, P. M. Foster and W. S. Kyte Effect of particle concentration on the boundary layer flow in a	e 3	Simulation of absorption of $H_2S$ and $CO_2$ into aqueous alkanolamines in tray and packed columns by A. E. Cornelissen	242
hydrocyclone by S. D. Laverack	. 33	Temperature of coke particles in a fluidised combustor by J. C.	
Effect of particle proximity on the drag force generated at high Reynolds numbers by M. L. Allen.	. 187	Roscoe, A. R. Witkowski and D. Harrison	69
Electrochemical production of propylene oxide in a small pilo	t	Thermal regenerator design charts including intraconduction effects by P. J. Heggs, L. S. Bansal, R. S. Bond and V. Vazakas	265
plant by T. Bejerano, S. Germain and F. Goodridge Enhancement factor for instantaneous irreversible gas/liquid reac	. 28	Transportation of cuboid particles in horizontal pipelines by G.	175
tions by H. T. Karlsson and I. Bjerle	. 138	Turbulent air flow over water waves by N. C. G. Markatos	251
Experimental study of the scale-up of a well-stirred crystalliser by J. R. Bourne and K. Hungerbueler.	. 51	Uptake characteristics of selected biochemicals on coated and	
Film penetration model for mass and heat transfer with high fluxe	s	uncoated activated charcoal by M. Skalsky and P. C. Farrell.	91
by R. K. M. Thambynayagam, P. Winter and S. J. Branch . Fluidisation of cuboid particles by G. McKay and H. McLain	. 277	Voidage fraction near a horizontal tube immersed in a fluidised bed by S. Fakhimi and D. Harrison	
BOO	KF	REVIEWS	
			D
	Page		Page
Advances in Biochemical Engineering Volume 12; Immobilised Enzymes II. Edited by T. K. Ghose, A. Fiechter and N. Blakeborough (Springer-Verlag) Reviewed by J. A. Howell		Measurement of Two Phase Flow Parameters by G. F. Hewitt (Academic Press) Reviewed by N. I. Heywood.	214
Advances in Biochemical Engineering Volume 13: Mass Transfer and Process Control. Edited by T. K. Ghose, A. Fiechter and N. Bleleberger & Control. Edited by T. K. Ghose, A. Fiechter and N.	1-12	Physicochemical Measurement by Gas Chromatography by J. R.	
biakeborough (Springer-Verlag) Reviewed by J. A. Howell	. 215	Conder and C. L. Young (Wiley)	142
Advances in Biochemical Engineering Volume 14; Microbia	1	Dullien (Academic Press) Reviewed by R. A. Dawe	287
Metabolism. Edited by A. Fiechter (Springer-Verlag) Reviewed by P. Dunnill.	. 216	Progress in Filtration and Separation I. Edited by R. J. Wakeman (Elsevier) Reviewed by K. J. Ives	141
Bubbles, Drops and Particles by R. Clift, J. R. Grace and M. E		Rheological Techniques by R. W. Whorlow (Ellis Horwood)	
Weber (Academic Press) Reviewed by J. C. Lee	. 141	Reviewed by D. R. Oliver	214
		Science and Technology of Polymer Processing. Edited by N. P.	
Equilibrium Thermodynamics for Engineers and Scientists by R W. Haywood (John Wiley) Reviewed by K. G. Denbigh	. 288	Suh and Nak-Ho Sung (MIT Press) Reviewed by D. P. Isherwood	288

